



# UNITED STATES PATENT AND TRADEMARK OFFICE

*eev*  
UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,109	03/23/2004	Masatsugu Masuda	0951-0132P	1859
2292 7590 05/16/2007 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER LOUIE, WAI SING	
			ART UNIT 2814	PAPER NUMBER
			NOTIFICATION DATE 05/16/2007	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/806,109	<b>Applicant(s)</b> MASUDA ET AL.	
	<b>Examiner</b> Wai-Sing Louie	<b>Art Unit</b> 2814	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10, 11, 13, 24, 25, 27, 28 and 32-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 10, 24, 25, 28, 32, 33 and 35 is/are rejected.
- 7) ☒ Claim(s) 5-8, 11, 13, 27 and 34 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                            |                                                                                         |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                           | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made:

Claims 1-4, 10, 24, 28, 32-33, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pasco (US 5,083,240) in view of Lu et al. (US Pub. 2003/0117794).

With regard to claims 1, 24, 33, and 35, Pasco discloses a light guide device (col. 3, line 4 et seq. and fig. 1) comprising:

- At least one light source 6, an LED, (col. 3, line 33) in which light of the light source is guided and emitted from an operation member 3 having translucent properties (col. 3, lines 22-23) via an optical waveguide 1 (col. 3, lines 7-10);
- Pasco does not disclose a region that contains phosphor. However, Lu et al. disclose backlight module having a light guide 311 containing phosphor in a path through which the light of the light source 310 is guided (Lu paragraph [0022]), which is separated from the light source 310 (Lu fig. 3). Lu et al. teach the phosphor converts the light into high brightness uniform desired spectrum white light (Lu paragraph 0012]). Therefore, it would have been obvious to one of ordinary skill in the art to modify Pasco's device with the teaching of Lu et al. to

provide phosphor in a path through which the light of the light source 310 is guided in order to produce high brightness uniform desired spectrum white light.

- “The at least one light source is detachable from the region that contains phosphor” is an intended use of a device. However, the intended use of a product, which does not add any new feature or new structure to the device, is held unpatentable. *In re Alberston* 141 USPQ 730 (CCPA 1964); *In re Heck* 114 USPQ 161 (CCPA 1957).

With regard to claim 2, Pasco discloses the operation member 3 is constituted by a plurality of keytops (col. 3, lines 22-23).

With regard to claims 3 and 32, Pasco modified by Lu et al. disclose the region that contains phosphor is contained in a vicinity of the light source (Lu fig. 3a).

With regard to claim 4, Pasco modified by Lu et al. disclose the phosphor is constituted by a plurality of types of phosphors that emit light with different colors from each other (Lu paragraph 0021]).

With regard to claims 10 and 28, Pasco discloses the electronic equipment is a mobile phone (col. 1, line 13).

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pasco (US 5,083,240) modified by Lu et al. (US Pub. 2003/0117794) as applied to claims 1 and 24 above, and further in view of Physical of Semiconductor Device by S.M. Sze, second edition (page 683 fig. 1).

With regard to claim 25, Pasco modified by Lu et al. disclose the light source 310 emits UV or blue light (Lu paragraph [0022]), but do not disclose the wavelength is in a range from 400 to 430 nm. However, Sze discloses the near UV to blue light is in a range of 390 to 455 nm. Therefore, it would have been obvious the light source in Lu is in this range.

*Allowable Subject Matter*

Claims 5-8, 11, 13, 27, and 34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance:

The prior art of record does not disclose or suggest either in singularly or in combination the following limitations and other elements in the claims.

Reference Pasco does not disclose:

- A plurality of regions that contains phosphor, where the plurality of regions that contain phosphor are contained in each of the respective plurality of keytops.

Reference LaPointe et al. do not disclose:

- A plurality of regions that contains phosphor, where the plurality of regions that contain phosphor are contained in each of the respective plurality of keytops.

Reference Lu et al. do not disclose:

- Lu et al. disclose the LED with phosphor, but do not disclose the plurality of keytops each contains LED.

Therefore, the above references do not disclose the claimed invention of present application and claims 5-8, 11, 13, 27, and 34 are allowed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

#### *Response to Arguments*

Applicant's arguments filed 2/26/2007 have been fully considered but they are not persuasive.

- Applicant argues that Pasco and Lu do not teach or suggest of locating a phosphor layer within the light guide structure of Pasco or locating the color-shift medium of Lu in the path of the light beam of Pasco (see page 9 of remarks). However, Pasco discloses all limitations of independent claims 1 and 24 except the phosphor contained in the vicinity of the light source. Lu et al. disclose a layer of phosphor on the light source to convert the color of the emitted light (Lu paragraph [0022]). Lu et al. also provide a motivation that this will produce a higher uniform brightness of white light (Lu paragraph [0022]). Therefore, the combination of Pasco and Lu et al. is proper.

*Conclusion*

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

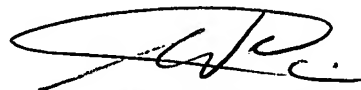
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wai-Sing Louie whose telephone number is (571) 272-1709. The examiner can normally be reached on 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (571) 272-1705. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2814

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



WAI-SING LOUIE  
PRIMARY PATENT EXAMINER

Wsl  
May 8, 2007.